



Joint Close Air Support Joint Test and Evaluation (JCAS JT&E)



Testing With Training: A Success Story

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16 Aug



Joint Test & Evaluation Purpose



- Answer CINC/Service nominated problems/issues
- Provides quantitative information used for analyses of joint military capabilities
- Assess Service systems interoperability in joint operations
- Evaluate and recommend improvements to joint technical and operational concepts

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JCAS JT&E Charter



- Conduct a JT&E to investigate, evaluate, and improve the operational effectiveness of joint U.S. Close Air Support
 - Determine the baseline effectiveness of joint Close Air Support
 - Identify changes to TTP, equipment, and training to increase effectiveness

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Close Air Support



“Air action by fixed- and rotary-wing aircraft against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces.” Joint Pub 1-02

Close does not imply a specific distance. The determining factor is the requirement for detailed integration because of proximity, fires, and/or movement. Joint Pub3-09.3

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JCAS JT&E Directors



Director Col Dave Brown, USAF
F-4, F-117, F-106

Army Deputy LTC Bryan Campbell
AH-64, AH-1, OH-58, Armor

USAF Deputy Lt Col Scot Chiasson
F-111, O-2, A/OA-10, ALO

USMC Deputy Maj James Quinn
F/A-18D

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JCAS JT&E Guidance



- **General Officer Steering Committee (GOSC)**
 - Members
 - National Training Center (NTC)
 - Air Warfare Center (AWFC)
 - Marine Corps Air Ground Combat Center (MCAGCC)
 - Naval Strike and Air Warfare Center (NSAWC)
 - Joint Staff, J8 representation
- **Subject Matter Expert Seminar**
 - Maneuver, Fire Support, Terminal Control, and Aviation

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JCAS JT&E Background



- Testing Began 98
- Mini-test November 98
- Day CAS Field Test March 99
- Convened (4) GOSCs
- Participant of (4) Symposiums

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JCAS JT&E Methodology



- Focused mini-tests
- Field testing
 - Deploy to Field Training Exercises
- Surveys of current operators
 - Web based
- Professional gatherings
 - JCAS SME Seminars
 - JCAS Symposiums

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JCAS JT&E Testing



- Variation from other JT&Es
 - Testing with Training
 - Multiple Data Collection Opportunities
 - Observe Decision Makers
- Formalized agreements
 - National Training Center (NTC)/Nellis
 - 29 Palms

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JCAS JT&E Methodology Venue Instrumentation



- Fully instrumented ranges at NTC/Nellis
 - In-place systems
 - TSPI, Digitize tactical communications
- No instrumentation at 29 Palms
 - JCAS portable systems
 - GPS TSPI, Digitize tactical communications
- Supplemented with Palm Pilot, Voicelt, & GPS

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JCAS JT&E Data Collection



Tactical Operations Center (TOC)



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JCAS JT&E Data Collection



TACTICAL AIR CONTROL PARTY (TACP)



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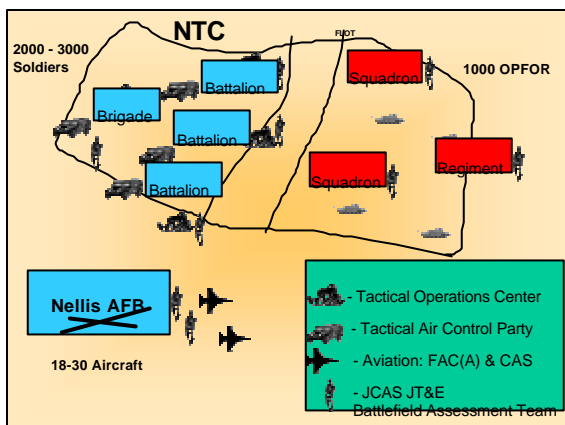
JCAS JT&E Data Collection



AVIATION



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JCAS JT&E Data Collection



Post Battle Assessment



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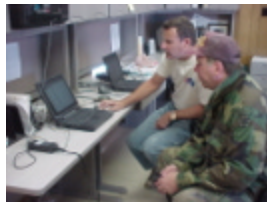
JCAS JT&E Data Download



Field



Garrison



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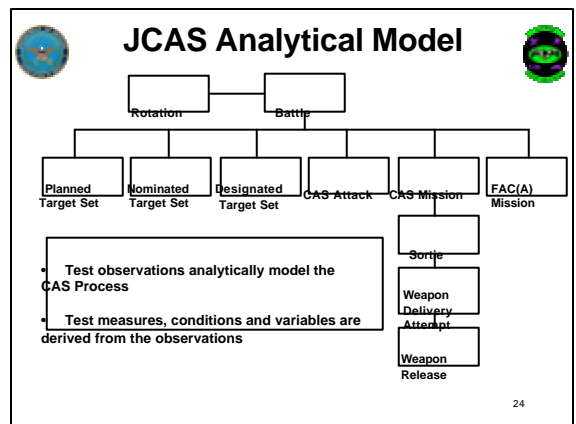
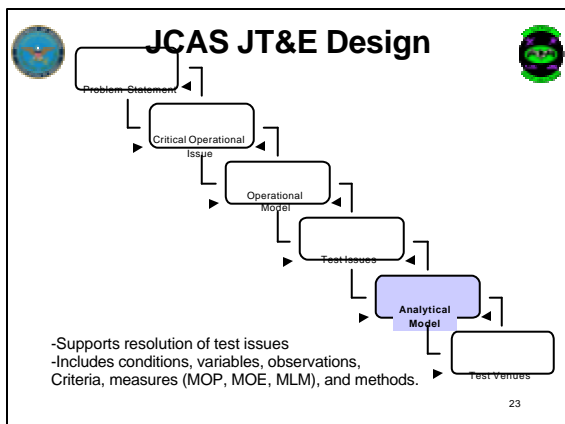
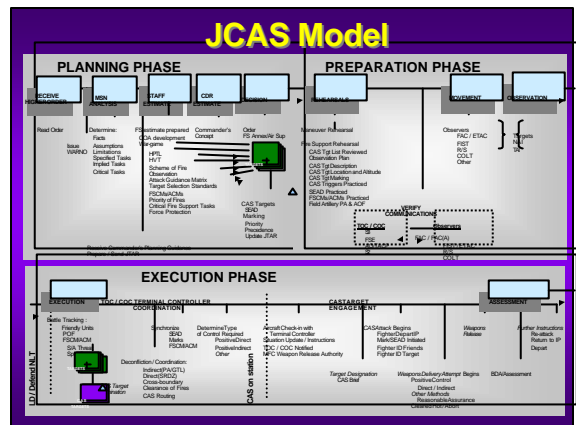
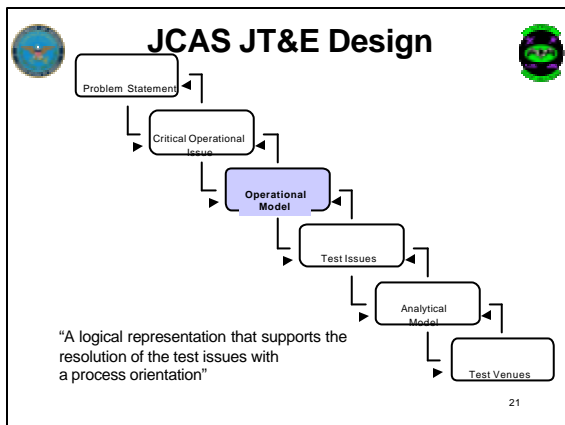
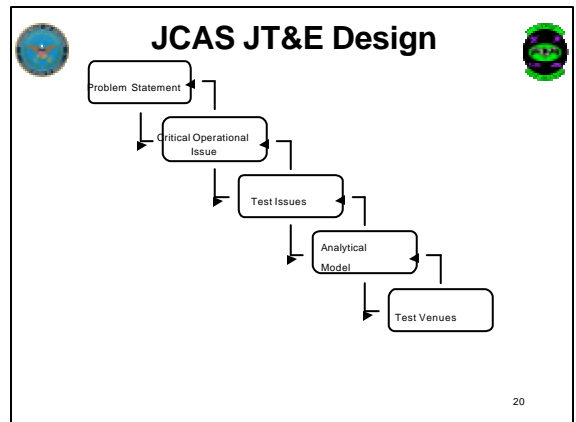
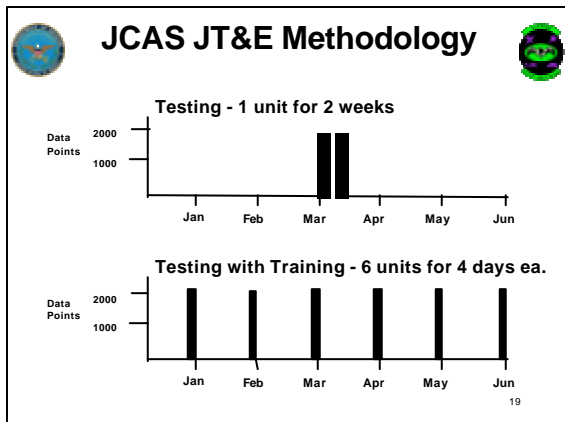


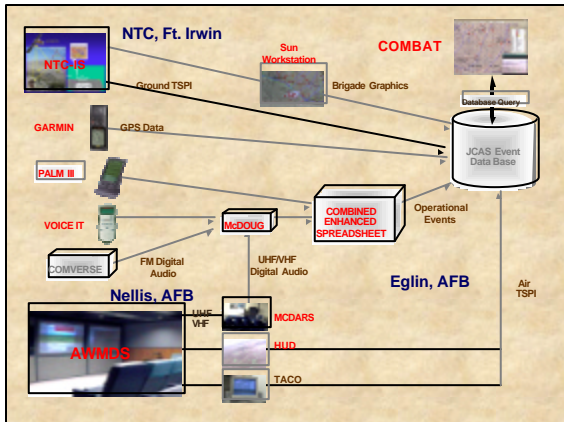
Interim Observations



- 11 Maneuver brigades / 26 battalions
- 22 Battles
 - Observed first two of each rotation
- Over 39,000 data elements
 - 218 CAS Sorties
 - 438 Weapon delivery attempts
- A joint training environment

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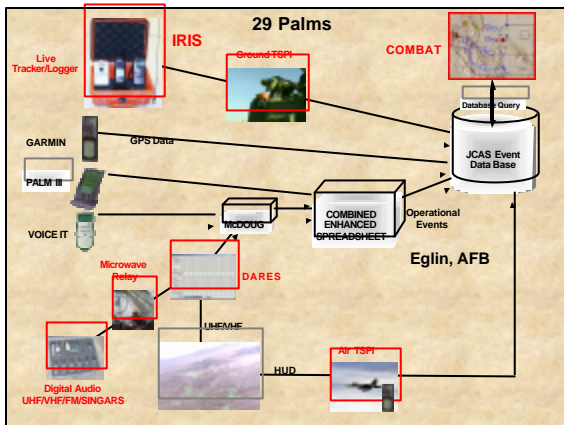


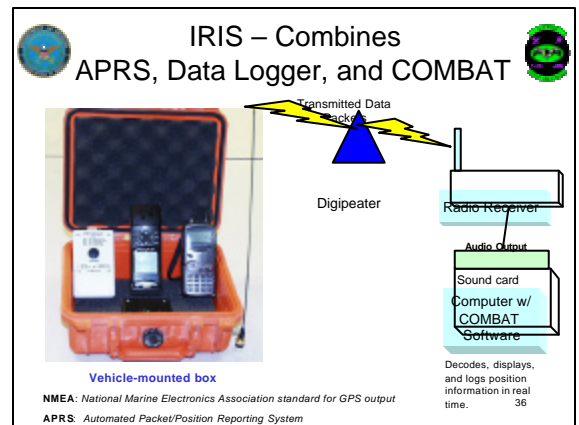
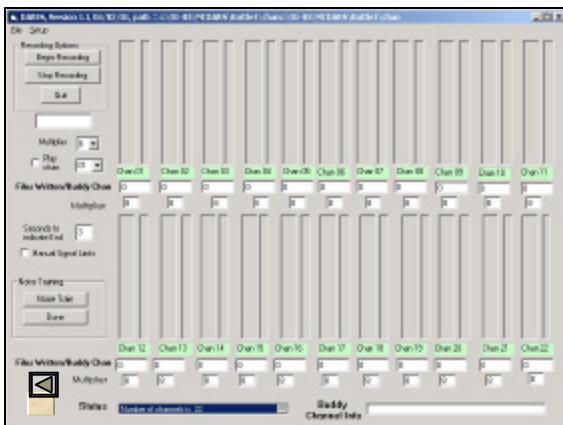
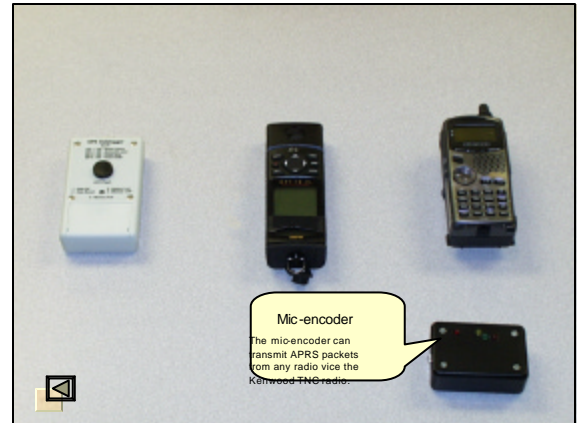
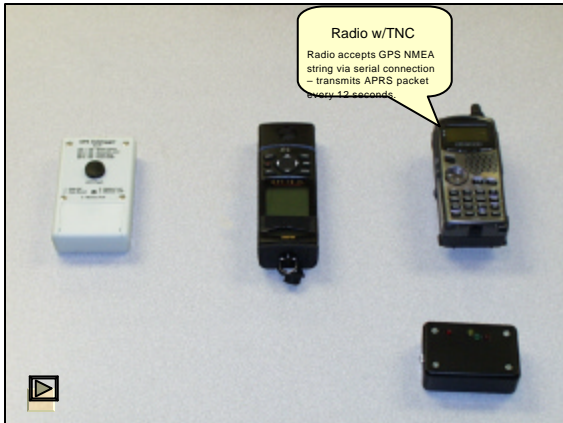
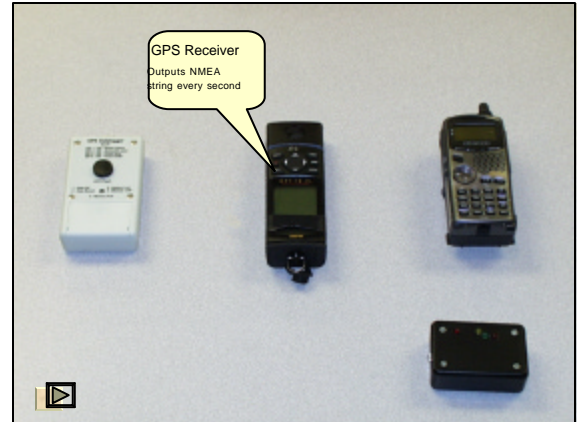
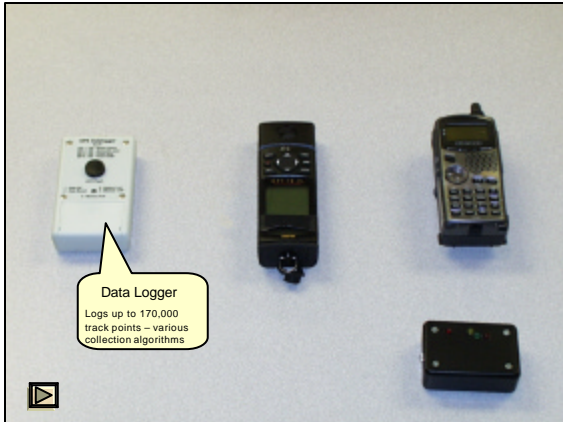


Field Testing Non-Instrumented Range

- 29 Palms
- Use same data collection package
 - Same test measures
- Instrumentation package required
 - Communications
 - Air/Ground TSPI

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Testing with Training Positives



- Multiple Testing Opportunities
- Operational Realism
 - Scenario
 - Players
- Cost Savings
- Improved Instrumentation

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Testing with Training Limitations



- Non-Interference Issues
- Uncontrolled Variables
- Complex Reduction
- Trainers suspect Testers

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Testing with Training Conditions for Success



- Professional Working Relationships
- Must do your homework
- Effective MOAs
- Testing ... Noninterference with Training
- Identify Test Measures early-on
- *Execute data collection with an operational mindset ... a must!*

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JCAS JT&E Legacy Products



- Baseline of joint CAS effectiveness (day & night)
- Instrumentation Enhancements
- NTC/29 Palms battle replay CD
- Recommended changes to joint CAS training, doctrine, and equipment
- Combined testing with training on a non-interference basis

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OSD Joint Close Air Support (JCAS)



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Field Testing Real Time Tracking



- 29 Palms
- 3 vehicles tracked, 12 sec sample rate, 1200 baud data transmission, 2 digipeaters, data loggers used auto algorithm
- Coverage: approximately 3000 sq km (29 Palms Range)
- Future: move to 9600 baud packet radio
 - 12 sec sample rate => 12-15 vehicles
 - 25-30 sec sample rate => 25-30 vehicles
- To track more vehicles, lower sample rate and/or add more frequencies
- Data loggers capable of 1sec sample rate.
- By combining a GPS data logger and APRS, we are capable of reasonable situational awareness and accurate position logging.

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JCAS JT&E On-going Actions

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JCAS JT&E Future Operations

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